

UNITED STATES PATENT OFFICE.

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STOVE-BODY FASTENING.

SPECIFICATION forming part of Letters Patent No. 608,347, dated August 2, 1898.

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To all whom it may concern:

Be it known that I, WILLIAM D. SOUTHARD, a citizen of the United States, and a resident of Peekskill, in the county of Westchester and State of New York, have invented a certain new and useful Stove-Body Fastening, of which the following is a specification.

This invention relates particularly to stoves having sheet-iron bodies, although it is not limited to them, and has for its object the saving of time and labor in the mounting of stoves and secures greater strength and adapts the stove for readily taking apart for shipment or repairs. These objects are attained by the means set forth in the accompanying drawings and this specification, which together constitute a full and exact description of my invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In the several figures of the drawings like letters and numerals refer to similar parts.

Figure I represents the lower end of a stove-cylinder attached to the stove-base by my devices. Fig. II is a plan of the same. Fig. III is a cross-sectional view of the clamping device. Fig. IV represents the manner of inserting the clamp to position. Fig. V is a front view, full size, of the clamp. Fig. VI is a reverse view, full size, of the clamp. Fig. VII represents the hole cut in the cylinder for the attachment of the clamp. Fig. VIII shows an auxiliary fastening attached to the door which is secured to the stove-cylinder.

In Fig. I, *a* represents the lower end of a sheet-iron cylinder or stove-body; *b*, the base to which it is secured; *i*, the rim on the base inclosing the end of the cylinder; *c*, a clinker-door; *rr*, rivets fastening the door to the cylinder, and *d* my clamping device used in place of rivets for securing the cylinder.

Ordinarily the door *c* is riveted fast to the cylinder, which is made to go either inside or outside of the rim *i* and is held in place by means of rivets through the cylinder and the rim. This involves drilling the rims *i* and the consequent carrying of the bases to and from a drilling-room. The amount of metal left in the cylinder beneath the rivet is small, so that in handling the large sizes of stoves the weight of the base causes a tearing out of the riveted sheet-iron cylinder.

It is to save the extra handling involved in the riveting, the possible damages arising from handling, and to adapt the cylinder and base for easy separation in transporting and repairing the stoves that the clamping device *d*, Fig. I, is employed. It consists of a cast piece, preferably, although it may be a drop-forging, as shown in Figs. III, IV, V, and VI. A rectangular hole, as at 7, Fig. VII, is punched in the sheet-iron body at such intervals as may be required at points just above the rim, as in Fig. III, so that the bearing-shoulder of the clamp may draw upon the sheet metal without coming in contact with the upper edge of the rim *i*. It embodies a plate 1, Figs. III, IV, V, and VI, which lies on the outside of the cylinder, the shank 3, inclosing the bolt 4 6, and a shoulder 2, uniting the plate and shank, the said shank 3 and plate 1 being out of alinement one with the other, as shown clearly in Fig. III.

Fig. IV shows the manner of inserting the clamp in the hole through the cylinder, and in Fig. III is shown how the clamp by means of the nut 5 binds the cylinder close and firmly within the rim. Two of these clamps are shown in Fig. II, but two more would be used if the cast piece *e* were not used.

When a door-frame or any corresponding plate is used on the cylinder, lugs are cast thereon, and a screw is cast, preferably, in the lug, as shown at *e*, Fig. VIII. The door-frame is then secured to the cylinder by means of rivets *rr*, Figs. I and II, and the bolts 5' become the means for securing the front of the cylinder to the base. The holes for the bolts 5 5' are cast in the base, so that no drilling whatever is required for either of the fastenings. The number of clamps used on a cylinder will be proportioned to the size of the cylinder.

Of course the door-frames could be provided with rectangular holes corresponding to those punched in the cylinders and the clamps could be employed for them as well as the cylinders, but as simplicity and a minimum number of parts to handle is the aim of the invention the method shown for this particular purpose is preferred. It is evident, too, that the use of this clamp need not be limited to sheet-iron constructions nor solely to the bottoms of stove-cylinders. The tops may be

secured to the cylinders by the same means and the clamps may be employed upon cast plates of any shape, circular, flat, or otherwise. The outer plate 1 of the clamp would
5 be shaped to the surface against which it would rest, and its ornamentation could be in harmony with the ornamentation around it. In place of the screw 4 and nut 5 the shank may be tapped for a screw; but the method
10 shown is preferable in most cases. When the clamp is made of malleable iron or is a drop-forging, the screw may be integral with the shank. In the making of these clamps I do not wish to be limited to the particular shapes
15 herein shown so long as the principle of the invention is not departed from.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

In a stove the combination of the stove- 20
base provided with a vertical rim or flange, the stove body or cylinder provided with a rectangular opening and the clamping device comprising a shank and a plate arranged
25 parallel to but out of alinement with each other and connected together by a shoulder, the shank being adapted to pass through the opening of the cylinder, and means for drawing and securing the clamp to the base where-
30 by the cylinder and base are firmly united together.

Signed at Peekskill, in the county of Westchester and State of New York, this 22d day of November, A. D. 1897.

WM. D. SOUTHARD.

Witnesses:

MARTIN MOSES,

H. S. GWYME.